

**AMENDMENT TO THE DRAWINGS**

Please amend FIG. 20 to include therein a legend "Prior Art." A replacement figure incorporating this amendment is being submitted concurrently herewith.

## REMARKS

Claims 1, 2, 4-6, and 11-15 are pending in this application, with claims 1 and 12 being independent. Claims 1, 4-6, and 11 have been amended. Claims 3 and 7-10 have been canceled, and claims 12-15 have been added. Care has been taken to avoid introduction of new matter. Favorable reconsideration of the application in light of the following comments is respectfully solicited.

As a preliminary matter, Applicants note that the Office Action fails to address claim 11 in the instant application. As such, Applicants assume that claim 11 is deemed allowable since it has not otherwise been rejected over any of the cited prior art, and Applicants respectfully request indication of the same.

### Drawings

FIG. 20 of the instant application was objected to for failing to include a legend "Prior Art." FIG. 20 of the instant application has been amended to overcome this objection.

### Claim Rejections - 35 U.S.C. §§ 102

Claims 1, 2, 5, and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication Number 2002/0001361 ("Ueno"). Applicants respectfully traverse this rejection because Ueno fails to describe or suggest a Voltage-Controlled Oscillator ("VCO") device that includes, among other features, a variable current source circuit configured to respectively set a driving current of each of oscillation transistors included in the plurality of VCO circuits, as recited in claim 1.

Ueno, in FIGS. 2 and 3, illustrates a PLL circuit (10) comprised of a VCO forming part (11) including a plurality of voltage-controlled oscillators VCO1 to VCO<sub>n</sub>, a selector (12), and a

fuse switch circuit (13). Ueno at page 3, paragraph [45]. The selector (12) is configured to select and output an output of voltage-controlled oscillators VCO1 to VCO<sub>n</sub>. *Id.* The fuse switch circuit (13) is configured to set each voltage-controlled oscillator VCO1 to VCO<sub>n</sub> to operation enabling condition or to operation disabling condition. *Id.* In particular, a current of voltage-controlled oscillator is supplied or cut off depending on the ON/OFF condition of the fuse to set the operation enabling condition and the operation disabling condition. Ueno at page 4, paragraph [47]. To this end, the fuse switch circuit (13) includes a constant current circuit (13b) which provides constant current to the voltage controlled oscillators. Ueno at page 6, paragraph [76].

Although Ueno describes a VCO, it does not describe or suggest a VCO that includes a variable current source circuit configured to independently set a driving current of each of oscillation transistors included in the plurality of VCO circuits. In contrast and as noted above, Ueno describes a constant current circuit, which provides a constant current to the voltage controlled oscillators. Accordingly, Ueno fails to describe or suggest a VCO device that includes, among other features, a variable current source circuit configured to respectively set a driving current of each of oscillation transistors included in the plurality of VCO circuits, as recited in claim 1.

Kimura does not appear to remedy the shortcomings of Ueno to describe or suggest the above-recited features of claim 1. Kimura appears to describe a variable current source, however, the variable current source does not appear to be configured to selectively set a driving current of each of oscillation transistors included in the plurality of VCO circuits. Kimura at page 3, lines 9-25. That is, Kimura does not appear to describe a variable current source for varying the current of the VCOs themselves for the purpose of reducing phase noise of the

respective VCOs. Rather, Applicants respectfully submit that Kimura appears to describe a variable current source for varying a current for a loop filter for the purpose of reducing phase noise of a synthesizer. As such, the underlying ideas of both the instant application and Kimura differ from one another.

Accordingly, Ueno and Kimura, either alone or in combination, do not appear to describe or suggest a VCO device that includes, among other features, a variable current source circuit configured to respectively set a driving current of each of oscillation transistors included in the plurality of VCO circuits, as recited in claim 1.

For at least the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1.

#### **New Claims**

Claim 12 includes features similar to the above-recited features of claim 1. Therefore, for at least the reasons presented above with respect to claim 1, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 12.

#### **Dependent Claims**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Because claims 1 and 12 are allowable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also allowable.

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In addition, it is respectfully submitted that the dependent claims are allowable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under §§ 102, 103 be withdrawn.

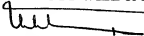
**Conclusion**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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